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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,110	05/06/2005	Maria Flytzani-Stephanopoulos	3024843 US02	5161

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EXAMINER

SMITH, JENNIFER A

ART UNIT	PAPER NUMBER
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1793

MAIL DATE	DELIVERY MODE
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12/19/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/534,110

Applicant(s)

FLYTZANI-STEPHANOPOULOS ET AL.

Examiner

JENNIFER A. SMITH

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) 21-44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Status of Application

Claim 21-44 remain withdrawn

Claims 12-16 and 18 have been amended.

Claims 1-20 are pending and presented for examination.

Withdrawal of Objection to Specification

The objection to Applicant's specification has been withdrawn in view of Applicant's amendments.

Withdrawal of Claim Rejections - 35 USC § 112, 2nd Paragraph

The rejection of claims 12-15 are rejected under 35 U.S.C. 112, second paragraph is withdrawn in view of Applicant's amendments

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The rejection of claims 1-18 and 20 under 35 U.S.C. 103(a) as being unpatentable over W. Liu et al. (1995) in view of Bartlett et al. (1998), as generally set forth in the rejection mailed 04/28/2008, stands.

In regard to the amended claim 12, Bartlett et al. teaches a pH range is typically between 10 and 11 [See Page 39]. Also See MPEP 2144.05 II-A (mentioned above) for explanation of obviousness of claimed concentration ranges. Because the solution taught by Bartlett is in the same pH range, one of skill in the art would expect a similar mole percent NaCN to be present.

In regard to the amended claims 13-16, Bartlett et al. teaches removal of close to 100% of gold via NaCN leaching [See Page 22, Figure 2.3].

In regard to the amended claim 18, Liu et al. teaches a lanthanum doped cerium oxide/gold catalyst [See Page 318, Section 3.1].

The rejection of claims 1-18 and 20 under 35 U.S.C. 103(a) as being unpatentable over W. Liu et al. (1995) in view of Bartlett et al. (1998) and further in view of Baumann et al. (US Patent No. 6,7,23,298), as generally set forth in the rejection mailed 04/28/2008, stands.

Response to Arguments

Applicant's arguments filed 09/19/2008 have been fully considered but they are not persuasive.

Applicant argues the references make clear that specific catalytic compositions may be damaged or made ineffective under reaction conditions and Liu et al. and Baumann et al. and the references relate to catalysts useful for water gas shift reactions but do not teach or suggest the removal of material from the catalytic surface. The Bartlett reference is cited to remedy this deficiency and although Applicants point out there is no discussion of a water gas shift reaction in the Bartlett reference, it is not made clear how or why the specific catalytic composition or process of producing the catalyst would be damaged or made inoperable by the incorporation of process taught by Bartlett et al. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Bartlett et al. teaches removal of gold via cyanide leach solutions [See Pages 17-18, 20-21] and it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to remove the gold metallic crystalline particles of the catalyst via this well known, industry accepted leaching removal method because a portion of the gold particles could be recovered and reused in a similar catalyst production

process. Recovery of the expensive gold catalytic material in this way reduces production costs. The boundary of the gold particle/cerium oxide is the active site for CO oxidation [See D2, Page 328, Section 4.1]. Therefore leaching to remove the majority of the gold would enhance the interaction between CO gas and the reaction sites.

Applicant argues the references fail to teach or suggest "producing on said surface of said substrate component a second component having metallic crystalline particles and a structure lacking crystallinity". A lanthanum-cerium nanocrystalline substrate is provided. Metallic gold particles are deposited on the support [See Liu, Sections 2.1, 3.16]. The gold is in the form of nanoparticles [See Liu, Table 4] and lacks a shared crystallinity for this reason.

Applicant argues that the Liu and Baumann references cannot be combined because the intended operating conditions are mutually exclusive. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention (process) and the prior art in order to patentably distinguish the claimed invention from the prior art.

Conclusion

Claims 1-20 remain rejected.

No claims are allowed.

THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **JENNIFER A. SMITH** whose telephone number is (571)270-3599. The examiner can normally be reached on Monday - Friday, 8:30am to 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571)272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.A. LORENZO/
Supervisory Patent Examiner, Art Unit 1793

Jennifer A. Smith
December 17, 2008
Art Unit 1793

JS